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CASE REPORT

An Aneurysm of the Internal Jugular Vein

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Introduction

We report the case of a 28-year-old man with a right sided jugular venous aneurysm that thrombosed and recannalised. Incidence, presentation, complications and treatment are discussed.

A 28-year-old man presented with a history of occasional swelling on the right side of the neck. There was no previous history of surgery or trauma to the neck, glandular inflammation, nor any evidence of right heart failure.

He was initially referred to a general surgical clinic. The swelling was first noted aged 16 and had progressively enlarged to the size of an orange, but only on coughing and straining. He was then referred to our vascular clinic and in the intervening month, the lump had become a constant, 6 × 4 cm mass in the right side of the neck (Fig. 1). This was hard non-tender, non-pulsatile and with no bruit. An MRI scan confirmed the presence of a thrombosed right sided jugular venous aneurysm, pushing the carotid artery posteriorly and displacing the trachea to the left (Fig. 2).

On admission to hospital 3 weeks later for excision of the thrombosed segment of jugular vein, the mass had disappeared, on performing a valsalva manoeuver the mass could be made to reappear, but to only half its original size. Doppler examination revealed a post-thrombotic recannalised, jugular vein that was patent and had no evidence of residual thrombus. The patient was discharged to outpatient follow up with no further treatment.

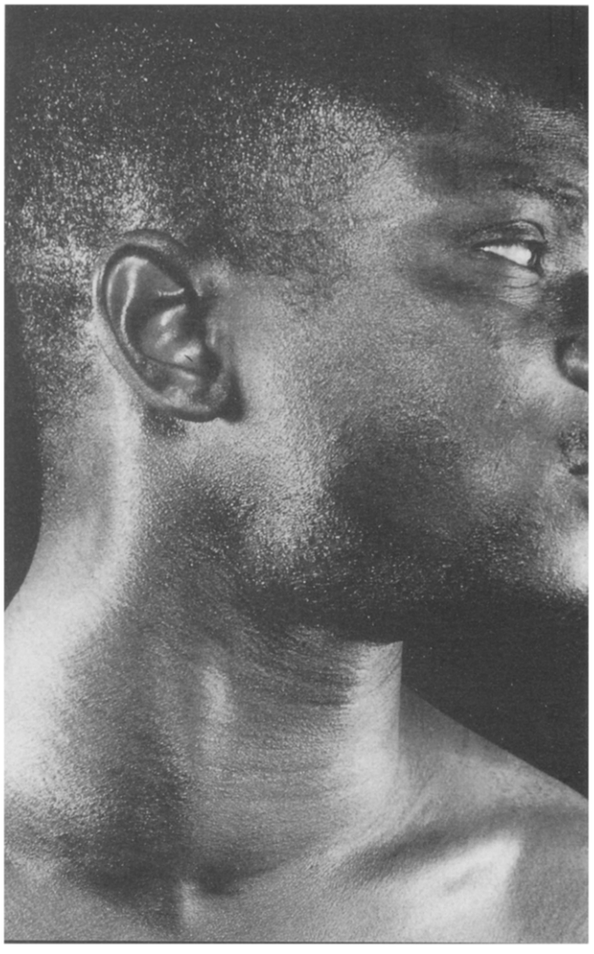

Fig. 1. Thrombosed right internal jugular venous aneurysm.

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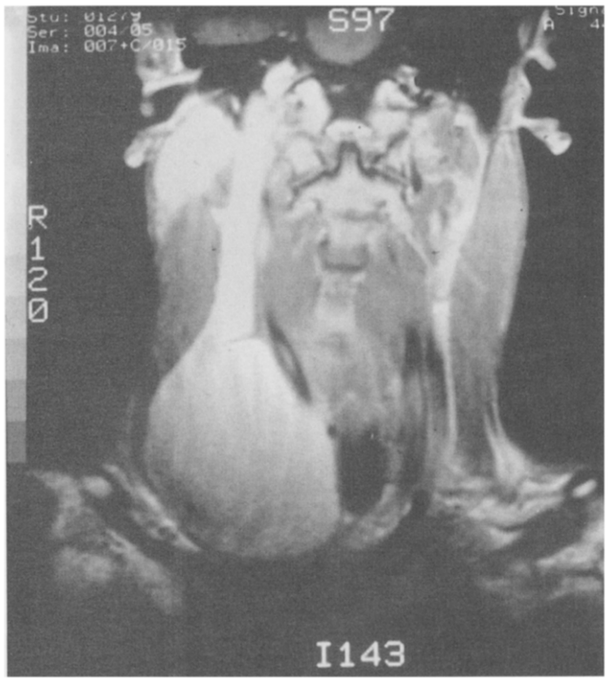

Fig. 2. MRI scan of thrombosed right jugular venous aneurysm.

Discussion

Primary venous aneurysms are rare, with only 311 cases reported since 1939.[1] Sixty-two percent occurred in patients less than 40 years of age, there is no difference between the sexes and no geographical pattern. Unlike arterial aneurysms the aetiology is difficult to establish, but trauma, inflammation and congenital weakness may all be responsible.[2]

The commonest presentation of primary aneurysms (52%) is a soft, compressible, usually sub-cutaneous mass, that is found along the line of the vein from which it arises. Pulmonary emboli from venous aneurysms (especially popliteal) occur in 6%,[3,4] rupture in 1.2% and the overall mortality is 0.3%

The commonest site is the internal jugular vein (18%), the long saphenous vein (10%), portal vein (9%), popliteal and azygos veins (7% each) and superior vena cava (6%). Of the 205 patients operated on three died (an operative mortality of 1.5%).

There are no reports of embolisation from the jugular vein or of thrombosis with recannalisation. In this case the thrombosed aneurysm has recannalised and left a thicker walled post thrombotic jugular vein that does not expand to the same degree as before.

A jugular venous aneurysm usually presents as an expansile lump in the neck along the line of the internal jugular vein. This may be apparent only on coughing or straining. It is usually painless although thrombosis can cause pain and this may then exert pressure symptoms on surrounding structures.

The treatment of symptomatic aneurysms is exclusion of the aneurysmal segment of vein.[5] If the aneurysm is saccular then simple clipping of the neck should suffice. If the aneurysm is fusiform, exclusion and bypass may be necessary, especially if the vein is the sole source of venous drainage. In the case of jugular venous aneurysm unilateral exclusion by ligation is safe. Asymptomatic aneurysms can be safely observed, but early intervention may be necessary if they become symptomatic.

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